REMARKS

Favorable reconsideration of this application is respectfully requested in view of the amendments above and the following remarks. By virtue of the amendments above, Claim Claims 10, 24, 37, and 50 have been amended. Therefore, Claims 2-4, 10, 11, 24, 37, and 50-69 are currently pending in the present application, of which, Claims 10, 24, 37, and 50 are independent.

No new matter has been introduced by way of the claim amendments and entry thereof is therefore respectfully requested. Support for the text added to Claims 10, 24, 37, and 50 may be found on page 11, lines 24-30 of the Specification of the present invention. Support for this addition may also be found in co-pending and commonly assigned U.S. Patent Application Serial No. 10/157,892, filed May 31, 2002. The disclosure contained in that Application was incorporated by reference in its entirety in the Specification of the present invention.

Information Disclosure Statement and Drawings

The Applicants note with appreciation the indication that the references cited in the Information Disclosure Statement filed on October 31, 2003 have been considered and that the Drawings submitted on October 31, 2003 are accepted.

Allowable Subject Matter

The indication that Claims 53 and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form is also noted with appreciation. Claims 53 and 54 have not been incorporated into independent claims because it is respectfully submitted that independent Claim 10, upon which Claims 53 and 54

depend, are allowable over the cited documents of record. However, Applicants respectfully reserve the right to amend these claims at a later time.

Claim Rejection Under 35 U.S.C. §103

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Spinazzola et al. in view of Nakazato et al. and Burd

The Official Action sets forth a rejection of Claims 2-4, 10, 11, 51, 52, and 55 under 35 U.S.C. §103(a) as allegedly being unpatentable over the disclosure contained in U.S. Patent No. 6,557,357 to Spinazzola et al. in view of U.S. Patent No. 5,718,628 to Nakazato et al. and U.S. Patent No. 5,419,489 to Burd. This rejection is respectfully traversed because none of these cited documents, considered singly or in combination with one another disclose all of the features as set forth in independent Claim 10 and the claims that depend therefrom.

The Official Action states that Spinazzola et al. discloses some of the elements recited in Claim 10 of the present invention. The Official Action correctly notes that Spinazzola et

al. fails to disclose that a characteristic of the removal of cooling fluid through returns is varied. In an effort to make up for the deficiencies in Spinazzola et al., the Official Action relies upon the disclosure contained in Nakazato et al.

More particularly, in describing Nakazato et al., the Official Action asserts that the air outlets 7b are returns and that the fans 7f are controlled to vary removal of cooling fluid from each of the equipment 7 (racks). The Official Action also asserts that it would have been obvious to modify Spinazzola et al. by "apply[ing] these air removal control features of Nakazato et al. to the plenum system of Spinazzola et al. for the purpose of accurately controlling the temperatures of the data racks." The modification of Spinazzola et al. proposed in the Official Action is respectfully traversed for at least the following reasons.

Initially, it is submitted that the arrangement and configuration of the equipment 7 in Nakazato et al. is similar to that shown in Figure 1 of Spinazzola et al. Spinazzola et al. describes the illustration of Figure 1 as pertaining to a conventional computer room. (Column 1, lines 34-36). In further describing Figure 1, Spinazzola et al. states that "it can be appreciated that the disadvantage of the conventional system set forth above requires a significant amount of fan horsepower for operation and thus the need has arisen for reducing the amount of horsepower necessary to operate the fan 16. In addition, the flow of cooling air across the rack is uncontrolled so as to not necessarily adequately cool each equipment member in the rack 7." (Column 2, lines 60-67). Thus, Spinazzola et al. argues that rack systems that discharge heated air into an open space of a room has certain disadvantages. In order to attempt to overcome these problems, Spinazzola et al. suggests that ducts 24 be used to direct airflow from the rack casings 8 directly into a ceiling plenum 4b. In so doing, Spinazzola et al. actually teaches away from incorporating controllable returns in the plenum 4b as proposed in the Official Action.

Moreover, Nakazato et al. also teaches away from the modification proposed in the Official Action. For instance, as depicted in Figure 1, Nakazato et al. shows that the air exhausted from the equipment 7 is either re-circulated back into the equipment 7 or is drawn into an indoor unit 11 of an air conditioner. Nakazato et al. asserts that the re-circulation of the air exhausted from the equipment 7 into the equipment 7 is beneficial for a number of reasons. In one regard, Nakazato et al. argues that the circulation of the exhausted air into the air stream flowing from the indoor unit 11 reduces the air-blowing capacity of the indoor unit 11, thereby "leading to reduction of the facility cost." Nakazato et al. also argues that "[i]t is also possible to suppress the power consumption of the indoor fan 13, leading to a low operating cost" due to the air re-circulation. (Column 5, lines 2-8). Nakazato et al. further asserts that "the temperatures of the air streams released from the plural equipments 7 are made uniform, leading to a satisfactory temperature distribution within the room space 1." (Column 5, lines 12-15). By "satisfactory temperature distribution," Nakazato et al. is referring to a "comfortable living environment" in the room space 1. (Column 5, lines 26-27).

Nakazato et al., therefore, teaches away from the use of a plenum having a plurality of returns because Nakazato et al. advocates for the air exhausted from the equipment 7 to be re-circulated into the equipment 7. In this regard, it would also not have been obvious to modify Spinazzola et al. based upon the disclosure contained in Nakazato et al. as proposed in the Official Action.

Furthermore, even assuming for the sake of argument that the proposed combination of Spinazzola et al. and Nakazato et al. were valid, the proposed combination would not yield all of the features of Claim 10 alleged in the Official Action. For instance, Nakazato et al. fails to disclose that the plurality of returns are configured to removing cooling fluid from the data center and that the returns are operable to vary a characteristic of the cooling fluid

removal. Instead, Nakazato et al. discloses that the rate at which air is exhausted from the equipment 7 is constant and that the **only** change in airflow delivery is performed through operation of an air volume rate control unit 20. As recited in column 4, lines 20-23, Nakazato et al. states that "[t]he controller 40 serves to control the operations of the motors 17M, 16M and 13M in accordance with instruction of the operating unit 41 to **start and stop** operating the system shown in FIG. 1." (emphasis added). Nakazato et al., therefore, does not disclose that operations of the air conditioner components, including the indoor fan 13, are varied in response to sensed temperatures being outside of a predetermined temperature range. Consequently, the airflow returning into the indoor unit 11 is also not varied in response to sensed temperatures being outside of a predetermined temperature range.

The Official Action also correctly notes that neither Spinazzola et al., Nakazato et al., nor the combination thereof, disclose a mobile sensing device. In an effort to make up for this deficiency, the Official Action relies upon the disclosure contained in Burd. More particularly, the Official Action asserts that the mobile thermostat 9 reads on the mobile device of Claim 10. It is submitted, however, that the mobile thermostat 9 of Burd fails to include all of the features of the mobile device claimed in Claim 10.

For instance, Burd discloses that the mobile thermostat 9 (1) "should be able to provide an accurate functioning while it is on the wall or on the table, or on the chair, or at some other location." (Column 4, lines 45-47). Thus, the mobile thermostat 9 is most likely designed to be moved around by a user to various locations in various rooms to obtain temperatures at locations that are not covered by other sensors. In this regard, the mobile thermostat 9 is not self-propelled, nor is it configured to travel around racks, as set forth in Claim 10 of the present invention. Consequently, Burd fails to disclose a mobile device having all of the features of the mobile device claimed in Claim 10.

For at least the foregoing reasons, the proposed combination of Spinazzola et al., Nakazato et al., and Burd fails to disclose all of the elements of Claim 10 of the present invention. Accordingly, the Examiner is respectfully requested to withdraw the rejection of Claim 10 and to issue an allowance of Claim 10 over the cited documents.

Claims 2-4, 11, 51, 52, and 55 depend upon allowable Claim 10 and are also allowable over the cited documents of record at least by virtue of their dependencies. These claims are also allowable over the disclosure contained in cited documents for additional reasons. For instance, with respect to Claim 11 of the present invention, the cited documents fail to disclose that a plurality of returns are substantially independently controlled to thereby substantially independently vary removal of the cooling from the racks through the plurality of returns.

Spinazzola et al. in view of Nakazato et al. and Burd

The Official Action sets forth a rejection of Claims 24, 37, 50, and 56-59, under 35 U.S.C. §103(a) as allegedly being unpatentable over the disclosure contained in Spinazzola et al., Nakazato et al., and Burd and further in view of U.S. Patent No. 6,283,380 to Nakanishi et al. This rejection is respectfully traversed because none of these cited documents, considered singly or in combination with one another disclose all of the features as set forth in independent Claims 24, 37, and 50 and the claims that depend therefrom.

The Official Action asserts that the proposed combination of Spinazzola et al., Nakazato et al., and Burd discloses all of the elements of Claim 10. However, as stated above, these documents, considered singly or in combination, fail to disclose all of the elements claimed in Claim 10. For instance, there can be no motivation to combine Spinazzola et al. and Nakazato et al. because both documents actually teach away from the combination proposed in the Official Action. In addition, Burd fails to disclose a self-

propelled movable device, and therefore, the proposed combination would still fail to disclose all of the features of Claim 24.

The Official Action correctly notes that none of these documents disclose control being based on a predetermined temperature range. Thus, the Official Action relies upon the disclosure contained in Nakanishi et al. in an effort to make up for these deficiencies. More particularly, the Official Action asserts that Nakanishi et al. discloses a cooling method where a controller determines if sensed temperatures are within a predetermined range. The Official Action further asserts that modification of Spinazzola et al., Nakazato et al., and Burd with the disclosure contained in Nakanishi et al. would have been obvious "for the purpose of refining the control of temperature within the room."

Initially, it is respectfully submitted that Nakanishi et al. does not disclose that at least one return is varied in response to temperatures being outside of a predetermined temperature range. Instead, Nakanishi et al. pertains to control of fans 14 for supplying airflow into a computer room 10. Thus, the controller disclosed in Nakanishi et al. is configured to control supply fans 14 and not returns.

In addition, Nakanishi et al. does not make up for other deficiencies in Spinazzola et al., Nakazato et al., and Burd. For instance, Nakanishi et al. does not disclose a self-propelled movable device configured to detect at least one environmental condition at various locations of a data center. Therefore, even assuming for the sake of argument that the proposed combination of Spinazzola et al., Nakazato et al., Burd, and Nakanishi et al. were proper, the proposed combination would still fail to yield all of the elements of Claims 24, 37, and 50 of the present invention. Accordingly, the Examiner is respectfully requested to withdraw the rejection of Claims 24, 37, and 50 and to issue an allowance of these claims over the cited documents.

Claims 56-69 depend upon respective ones of allowable Claims 24, 37, and 50 and are also allowable over the cited documents of record at least by virtue of their dependencies. These claims are also allowable over the disclosure contained in cited documents for additional reasons. For instance, with respect to Claim 57, 62, and 67 of the present invention, the cited documents fail to disclose that a plurality of returns are substantially independently controlled to thereby substantially independently vary removal of the cooling from the racks through the plurality of returns.

Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

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